

ABSTRACT

TITLE: TO DETERMINE THE CLINICAL EFFICACY OF DIODE LASER (980 nm) THERAPY AS AN ADJUNCT TO NONSURGICAL PERIODONTAL THERAPY IN THE TREATMENT OF GENERALIZED CHRONIC PERIODONTITIS: A RANDOMIZED CONTROLLED CLINICAL TRIAL

BACKGROUND: The basic approach to the treatment of periodontal disease has always been the removal of supra gingival and sub gingival deposits, which is primarily achieved by scaling and root planing. However, conventional periodontal therapy does not completely eliminate bacterial products from periodontal pockets which might lead to the failure of therapy in many situations. The present study was to evaluate the clinical and biochemical effect of Diode laser (980 nm) therapy as an adjunct to Scaling and root planing in patients with generalized chronic periodontitis.

MATERIALS AND METHODS: Twenty patients with generalized chronic periodontitis were included in this study. Two quadrants in the maxillary arch were selected randomly for each patient. Test sites were treated with scaling and root planing along with multiple applications of diode laser (980 nm) and the control sites were treated with scaling and root planing alone. Clinical parameters and GCF IL-1 β levels were assessed at baseline and at 3 months after treatment.

RESULT: Both Scaling and root planing and adjunctive use of diode laser (980 nm) along with scaling and root planing was found to be effective in the treatment of chronic periodontitis. However the combination therapy provided a statistically significant

improvement in the clinical outcome and the levels of gingival crevicular fluid IL-1 β than the use of scaling and root planing alone.

CONCLUSION: Compared to Scaling and root planing alone multiple application of diode laser (980 nm) along with scaling and root planing was effective in the treatment of chronic periodontitis and can be used as an adjunct to nonsurgical therapy.

KEY WORDS: Diode laser therapy, chronic periodontitis, Scaling and root planing.